

REMARKS

STATUS OF THE CLAIMS

Claims 1-87 are pending. No claim has been amended in this response.

Applicant respectfully acknowledges the withdrawal of the rejection of claims 42 and 45-47 under 35 U.S.C. § 112, second paragraph.

Applicant submits that the entry of this response would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

II. REJECTIONS UNDER 35 U.S.C. § 103

The Examiner maintains three rejections of all pending claims under 35 U.S.C. § 103. First, claims 1-34 and 52-87 are rejected as obvious over U.S. Patent No. 6,312,477 to De La Mettrie et al. ("De La Mettrie"). Second, claims 35-44 are rejected as obvious over De La Mettrie in view of Publication No. WO 98/40471 to Sorensen et al. ("Sorensen"). And third, claims 45-51 are rejected over De La Mettrie in view of U.S. Patent No. 6,309,426 to Dias et al. ("Dias"). Applicant disagrees and respectfully requests withdrawal of these rejections at least for the reasons of record as well as the following reasons.

A. Prima Facie Obviousness

Applicant respectfully reminds the Examiner that he has the burden of proving a prima facie case of obviousness. M.P.E.P. § 2142. To satisfy this burden, he must prove three elements: (1) some suggestion or motivation to modify a reference or combine reference teachings; (2) a reasonable expectation of success; and (3) the prior art reference (or references when combined) teach or suggest all the claim limitations.

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M.P.E.P. § 2143. Furthermore, the Examiner must set forth "clear and particular" evidence of these elements. *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). Otherwise, there cannot be the requisite "substantial evidence," which is necessary to sustain an obviousness rejection. *In re Zurko*, 258 F.3d 1378, 1384 (Fed. Cir. 2001); *In re Lee*, 277 F.3d 1338, 1344-45 (Fed. Cir. 2002). In this case and as discussed in greater detail below, the Examiner fails to proffer the requisite quantum of proof of a *prima facie* case of obviousness. Thus, Applicant respectfully submits the rejection should be withdrawn.

B. Rejection over De La Mettrie

The Examiner rejects claims 1-34 and 52-87 under § 103 as unpatentable over De La Mettrie. Final Office Action at 2. In response to Applicant's arguments that De La Mettrie does not teach or suggest pyridines within the scope of the presently claimed formula (I), the Examiner disagrees and argues that De La Mettrie "exemplifies the claimed compound 2,3-diamino-6-methoxypyridine among other pyridine derivatives that [are] described in the patents GB 1,026,978 and GB 1,153,196." Final Office Action at 2. Applicant respectfully submits that the Examiner misunderstands the precise nature of De La Mettrie's teachings.

De La Mettrie discloses, in part, heterocyclic bases, which may be, *inter alia*, pyridine derivatives, of which mention may be made "more particularly of the compounds described . . . in patents GB 1,026,978 and GB 1,153,196, such as 2,5-diaminopyridine, 2-(4-methoxyphenyl)amino-3-aminopyridine, 2,3-diamino-6-methoxypyridine." De La Mettrie, col. 8, lines 4-7 (emphasis added). De La Mettrie, therefore, does not in fact exemplify these compounds; rather, it redirects a person of

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ordinary skill in the art to the disclosures of other references for these compounds. Applicant notes, moreover, that De La Mettrie misconstrues the teachings of these other references: neither GB 1,026,978 nor GB 1,153,196 ("GB '978" and "GB '196") (collectively "the British patents") describe or even suggest several of the compounds De La Mettrie attributes to it. In particular, 2,3-diamino-6-methoxypyridine, which falls within the scope of the present claims, is not disclosed. Thus, it is an impossibility for De La Mettrie to "exemplif[y] the claimed compound 2,3-diamino-6-methoxypyridine . . . described" in the British patents when such a compound is not taught or suggested by these patents. Thus, all claim limitations are not taught or suggested by De La Mettrie, and there can be no *prima facie* case of obviousness. M.P.E.P. § 2143.03.

Moreover, the British patents teach away from the instant claims, when each is read and understood as a whole. M.P.E.P. § 2141.03; *see also In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000). First, neither of the British patents teaches or suggests substituted 2,3-diaminopyridines. Applicant points out that while GB '978 does teach 2,3-diaminopyridine, the pending claims require an alkoxy or hydroxyalkoxy group at the 6-position of formula (I). This substitution at the 6-position is not even remotely suggested by GB '978. Second, GB '978 requires the use of a 2,5-diaminopyridine: the 2,3-diaminopyridine is only an optional additional ingredient. GB '978, col. 1, lines 19-26; col. 2, lines 57-68; Examples I-XII. Thus, GB '978 specifically teaches a composition comprising at least one 2,5-diaminopyridine, either alone or with other pyridine derivatives, e.g., 2,3-diaminopyridine or 2,6-diaminopyridine. None of these diaminopyridines fall within the scope of the

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pyridine derivatives of present formula (I), which requires at least an amino at the 3-position, and an alkoxy at the 6-position.

Similarly, GB '196 specifically teaches substituted 2,5-diaminopyridine derivatives. GB '196, col. 1, lines 23-26. As noted above, the compound of present formula (I) can never be a 2,5-diaminopyridine derivative. It may be, for example, a 2,3-diamino-6-alkoxypyridine, a 2,3,5-triaminopyridine, or a 3-amino-2-alkoxypyridine, but not a 2,5-diaminopyridine.

Thus, the Examiner has failed to show with clear and particular evidence how De La Mettrie "teaches a hair dyeing composition comprising oxidation bases such as 2,3-diamino-6-methoxypyridine." Office Action dated February 21, 2002, at 3. Applicant again highlights that the disclosure of De La Mettrie, by referencing the British patents, actually teaches away from the pending claims. As a whole (which necessarily includes the disclosures of GB '978 and GB '196), therefore, De La Mettrie does not teach or suggest all limitations of claims 1-34 and 52-87. See *In re Kotzab*, 217 F.3d at 1370.

Accordingly, Applicant respectfully requests that the rejection over De La Mettrie be withdrawn.

C. Rejection over De La Mettrie in View of Sorensen

The Examiner rejects claims 35-44 as obvious over De La Mettrie in view of Sorensen. Final Office Action at 2. With respect to Sorensen, the Examiner's position is that one of ordinary skill in the art would have been motivated to modify De La Mettrie to use laccase (i.e., a 4-electron oxidoreductase) instead of the 2-electron oxidoreductases taught by De La Mettrie. Because Sorensen does not remedy the deficiencies of De La Mettrie, Applicant disagrees.

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Specifically, neither De La Mettrie, as discussed above, nor Sorensen discloses all the elements of the pending claims, e.g., pyridine derivatives of the instant formula (I). M.P.E.P. § 2143.03. Moreover, there is no motivation to combine the references. M.P.E.P. § 2143.01; *Dembiczak*, 175 F.3d at 999. While Sorensen teaches possible "dye precursors" that may act as an oxidizable substrate with laccases, it also requires a polyalcohol to be used together with the laccase. There is no reason why one of ordinary skill would have been motivated to take the lacase of Sorensen entirely out of the context of the reference and plug it into the composition of De La Mettrie, which requires no polyalcohol. The Federal Circuit makes clear that "rejecting patents solely by finding prior art corollaries for the claimed elements" would be "illogical and inappropriate." *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998) (quotation omitted). And, as noted, neither reference teaches a pyridine falling within the presently claimed formula, so the present invention could not be achieved by this combination in any event. Therefore, De La Mettrie in view of Sorensen does not render claims 35-44 obvious, and the rejection should be withdrawn.

D. Rejection over De La Mettrie in View of Dias

The Examiner rejects claims 45-51 as obvious over De La Mettrie in view of Dias. Final Office Action at 2. Dias is relied on for its teaching of hair dyeing compositions comprising "peroxidase enzyme[s] that us[e] a wide range of substances as donors." Office Action dated February 21, 2002, at 4. Because Dias, like Sorensen, does not remedy the deficiencies of De La Mettrie, Applicant disagrees.

Indeed, the Examiner relies on Dias for its teaching of peroxidases, using a similar argument to his reliance on Sorensen for teaching 4-electron oxidoreductases.

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Specifically, neither De La Mettrie, as discussed above, nor Dias disclose discloses all the elements of the pending claims, e.g., pyridine derivatives of the instant formula (I). M.P.E.P. § 2143.03. Moreover, there is no motivation to combine the references. M.P.E.P. § 2143.01; *Dembiczak*, 175 F.3d at 999. Dias does not teach or suggest a hair dyeing composition "comprising peroxidase enzyme[s] that us[e] a wide range of substances as donors." Office Action dated February 21, 2002, at 4. Rather, Dias, as whole, teaches a hair dyeing composition comprising an oxidizing agent, which is chosen from inorganic peroxygen oxidizing agents, preformed organic peroxyacid oxidizing agents, organic peroxide oxidizing agents, and mixtures thereof, and an oxidative hair coloring agent. Dias, col. 2, line 60 - col. 3, line 23; col. 6, lines 28-31. Dias makes clear that a "further additional material useful in hair coloring compositions according to the present invention is one or more enzymes." *Id.* at col. 26, lines 26-28. Thus, Dias as a whole does not teach an enzymatic oxidizing agent without the presence of another, separate oxidizing agent, such as inorganic peroxygen. See *In re Kotzab*, 217 F.3d at 1370.

Therefore, the Examiner has not shown why one of ordinary skill in the art would have been motivated to take the optional oxidizing agent of Dias out of context, use it in De La Mettrie's composition and expect to get the presently claimed composition, particularly when neither reference teaches a pyridine within the presently claimed formula, and further in the absence of the primary oxidizing agent required by Dias. Cf. *In re Rouffet*, 149 F.3d at 1357. De La Mettrie in view of Dias, thus, does not render claims 45-51 obvious, and the rejection should be withdrawn.

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III. **CONCLUSION**

In view of the foregoing remarks, Applicant submits that this claimed invention is not rendered obvious by the prior art references cited against this application. Applicant, therefore, requests the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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